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TECH CENTER 1600/2000



SEQUENCE LISTING

#+
<110> YAMAGISHI, Akihiko

<120> METHOD FOR IMPROVING THERMOSTABILITY OF PROTEINS, PROTEINS HAVING THERMOSTABILITY IMPROVED BY THE METHOD AND NUCLEIC ACIDS ENCODING THE PROTEINS

<130> 210383US0

<140> 09/897,108

<141> 2001-07-03

<150> JP2000-201920

<151> 2000-07-04

<150> JP2001-164332

<151> 2001-05-31

<160> 104

<170> PatentIn version 3.1

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48

ata gta tct aaa tct aag aga ata tta gcc aaa ata aat gag ctt tat

96

Ile Val Ser Lys Ser Lys Arg Ile Leu Ala Lys Ile Asn Glu Leu Tyr
 20 25 30

tct ttg cct atc gaa tat att gaa gta gaa gct ggt gat cgt gca ttg	144
Ser Leu Pro Ile Glu Tyr Ile Glu Val Glu Ala Gly Asp Arg Ala Leu	
35 40 45	
gca aga tat ggt gaa gca ttg cca aaa gat agc tta aaa atc att gat	192
Ala Arg Tyr Gly Glu Ala Leu Pro Lys Asp Ser Leu Lys Ile Ile Asp	
50 55 60	
aag gcc gat ata att ttg aaa ggt cca gta gga gaa tcc gct gca gac	240
Lys Ala Asp Ile Ile Leu Lys Gly Pro Val Gly Glu Ser Ala Ala Asp	
65 70 75 80	
gtt gtt gtc aag tta aga caa att tat gat atg tat gcc aat att aga	288
Val Val Val Lys Leu Arg Gln Ile Tyr Asp Met Tyr Ala Asn Ile Arg	
85 90 95	
cca gca aag tct atc ccg gga ata gat act aaa tat ggt aat gtt gat	336
Pro Ala Lys Ser Ile Pro Gly Ile Asp Thr Lys Tyr Gly Asn Val Asp	
100 105 110	
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Ile Leu Ile Val Arg Glu Asn Thr Glu Asp Leu Tyr Lys Gly Phe Glu	
115 120 125	
cat att gtt tct gat gga gta gcc gtt ggc atg aaa atc ata act aga	432
His Ile Val Ser Asp Gly Val Ala Val Gly Met Lys Ile Ile Thr Arg	
130 135 140	
ttt gct tct gag aga ata gca aaa gta ggg cta aac ttt gca tta aga	480
Phe Ala Ser Glu Arg Ile Ala Lys Val Gly Leu Asn Phe Ala Leu Arg	
145 150 155 160	
agg aga aag aaa gta act tgt gtt cat aag gct aac gta atg aga att	528
Arg Arg Lys Lys Val Thr Cys Val His Lys Ala Asn Val Met Arg Ile	
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Val Glu Tyr Ser Glu Met Tyr Val Asp Ala Ala Ala Asn Leu Val	
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Arg Asn Pro Gln Met Phe Asp Val Ile Val Thr Glu Asn Val Tyr Gly	
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Asp Ile Leu Ser Asp Glu Ala Ser Gln Ile Ala Gly Ser Leu Gly Ile	
225 230 235 240	
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Ala Pro Ser Ala Asn Ile Gly Asp Lys Ala Leu Phe Glu Pro Val	

245 250 255
 cac ggt gca gcg ttt gac att gct gga aag aat ata ggt aat ccc act 816
 His Gly Ala Ala Phe Asp Ile Ala Gly Lys Asn Ile Gly Asn Pro Thr
 260 265 270

 gca ttt tta ctt tct gta agt atg atg tat gaa aga atg tat gag cta 864
 Ala Phe Leu Leu Ser Val Ser Met Met Tyr Glu Arg Met Tyr Glu Leu
 275 280 285

 tct aat gac gat aga tat ata aaa gct tca aga gct tta gaa aac gct 912
 Ser Asn Asp Asp Arg Tyr Ile Lys Ala Ser Arg Ala Leu Glu Asn Ala
 290 295 300

 ata tac tta gtc tac aaa gag aga aaa gcg tta acc cca gat gta ggt 960
 Ile Tyr Leu Val Tyr Lys Glu Arg Lys Ala Leu Thr Pro Asp Val Gly
 305 310 315 320

 ggt aat gcg aca act gat gac tta ata aat gaa att tat aat aag cta 1008
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 35 40 45

Ala Arg Tyr Gly Glu Ala Leu Pro Lys Asp Ser Leu Lys Ile Ile Asp
 50 55 60

Lys Ala Asp Ile Ile Leu Lys Gly Pro Val Gly Glu Ser Ala Ala Asp
 65 70 75 80

Val Val Val Lys Leu Arg Gln Ile Tyr Asp Met Tyr Ala Asn Ile Arg
 85 90 95

Pro Ala Lys Ser Ile Pro Gly Ile Asp Thr Lys Tyr Gly Asn Val Asp
100 105 110

Ile Leu Ile Val Arg Glu Asn Thr Glu Asp Leu Tyr Lys Gly Phe Glu
115 120 125

His Ile Val Ser Asp Gly Val Ala Val Gly Met Lys Ile Ile Thr Arg
130 135 140

Phe Ala Ser Glu Arg Ile Ala Lys Val Gly Leu Asn Phe Ala Leu Arg
145 150 155 160

Arg Arg Lys Lys Val Thr Cys Val His Lys Ala Asn Val Met Arg Ile
165 170 175

AI
cm.

Thr Asp Gly Leu Phe Ala Glu Ala Cys Arg Ser Val Leu Lys Gly Lys
180 185 190

Val Glu Tyr Ser Glu Met Tyr Val Asp Ala Ala Ala Asn Leu Val
195 200 205

Arg Asn Pro Gln Met Phe Asp Val Ile Val Thr Glu Asn Val Tyr Gly
210 215 220

Asp Ile Leu Ser Asp Glu Ala Ser Gln Ile Ala Gly Ser Leu Gly Ile
225 230 235 240

Ala Pro Ser Ala Asn Ile Gly Asp Lys Lys Ala Leu Phe Glu Pro Val
245 250 255

His Gly Ala Ala Phe Asp Ile Ala Gly Lys Asn Ile Gly Asn Pro Thr
260 265 270

Ala Phe Leu Leu Ser Val Ser Met Met Tyr Glu Arg Met Tyr Glu Leu
275 280 285

Ser Asn Asp Asp Arg Tyr Ile Lys Ala Ser Arg Ala Leu Glu Asn Ala
290 295 300

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<210> 66

<211> 13

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<213> Bacillus subtilis

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Ala Gly Leu Ile Gly Gly Leu Gly Val Thr Pro Ser Gly Asn Ile Gly
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<211> 33
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Gly

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Ala Val Ala Glu Pro Val
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